DATA EVALUATION RECORD

EUGENOL
GERANIOL
2-PHENETHYL PROPIONATE
Z-7-TETRADECEN-2-ONE
NURANONE
(Bull Run Japanese & Oriental Beetle Trap)

STUDY TYPE: Waiver Requests
Aquatic Invertebrate Acute Toxicity (OPPTS 850.1010)
Freshwater Fish Acute Toxicity (OPPTS 850.1075)
Avian Acute Oral Toxicity (OPPTS 850.2100)
Avian Dietary Toxicity (OPPTS 850.2200)
Honeybee Acute Contact Toxicity (OPPTS 850.3020)
Seedling Emergence (OPPTS 850.4100)
Vegetative Vigor (OPPTS 850.4150)

MRIDs 47255009, 47255015, 47255024, 47255033

Prepared for
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Prepared by
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Task Order No. 08-006

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DATA EVALUATION RECORD

EPA Secondary Reviewer: Angela L. Gonzales /s/ 6/26/08

STUDY TYPE:	Waiver Requests Aquatic Invertebrate Acute Toxicity (OPPTS 850.1010) Freshwater Fish Acute Toxicity (OPPTS 850.1075) Avian Acute Oral Toxicity (OPPTS 850.2100) Avian Dietary Toxicity (OPPTS 850.2200) Honeybee Acute Contact Toxicity (OPPTS 850.3020) Seedling Emergence (OPPTS 850.4100) Vegetative Vigor (OPPTS 850.4150)
MRID NOS:	47255009, 47255015, 47255024, 47255033
DECISION NO:	384967
DP BARCODE:	DP348932
TEST MATERIAL:	Bull Run Japanese & Oriental Beetle Trap (a.i., 6.622% w/w geraniol, 15.480% w/w eugenol, 6.622% w/w 2-phenethyl propionate, 0.034% w/w oriental beetle pheromone, 0.013% w/w nuranone)
STUDY NO:	MRIDs 47255009, 47255015, 47255024, 47255033: Not provided.
SPONSOR:	Bull Run Scientific, VBT, 3808 N. Sullivan Road, Bldg. 16 BV, Spokane Valley, WA 99216-1616
TESTING FACILITY:	Not applicable
TITLE OF REPORT:	MRID 47255009: Eugenol: Toxicity to Non-Target Organisms MRID 47255015: Geraniol: Toxicity to Non-Target Organisms MRID 47255024: 2-Phenethyl Propionate: Toxicity to Non-Target Organisms MRID 47255033: Z-7-Tetradecen-2-one: Toxicity to Non-Target Organisms
AUTHOR:	MRIDs 47255009, 47255015, 47255024, 47255033: Smith, C.A.
STUDY COMPLETED:	MRID 47255009: August 30, 2007 MRIDs 47255015, 47255024, 47255033: August 31, 2007
CONFIDENTIALITY CLAIMS:	MRIDs 47255009, 47255015, 47255024, 47255033: None.

GOOD LABORATORY PRACTICE:	MRIDs 47255009, 47255015, 47255024, 47255033: A signed and dated GLP statement was provided. The efficacy data summarized in the study do not comply with the requirements of 40 CFR Part 160, but are believed to be adequate for pesticide registration purposes.
CONCLUSION:	The information submitted was not sufficient to support the requested waivers for Aquatic Invertebrate Acute Toxicity, Freshwater Fish Acute Toxicity, Avian Acute Oral Toxicity, Avian Dietary Toxicity, Honeybee Acute Contact Toxicity, Seedling Emergence, and Vegetative Vigor. No information was provided for the nuranone active ingredient, and the inert ingredients were not addressed. Also, seedling emergence and vegetative vigor were not addressed.

Test Material

Bull Run Japanese & Oriental Beetle Trap (a.i., 15.480% w/w eugenol, 6.622% w/w geraniol, 6.622% w/w 2-phenethyl propionate, 0.034% w/w oriental beetle pheromone, 0.013% w/w nuranone)

Product Description

Bull Run Japanese & Oriental Beetle Trap is an end use product to attract and trap adult male and female Japanese and Oriental beetles. The active ingredients in Bull Run Japanese & Oriental Beetle Trap (w/w) are 15.480% eugenol, 6.622% geraniol, 6.622% 2-phenethyl propionate, 0.034% Z-7-tetradecen-2-one, and 0.013% nuranone. The inert ingredients (w/w) are [redacted]

The product consists of a heavyweight plastic bag attached to four yellow plastic panels, and a separate plastic cartridge containing the attractant. The attractant is impregnated into inert polymer beads contained in the cartridge. The attractant cartridge is packaged in vapor-impervious clear plastic. When the trap is assembled by the user, the attractant cartridge is removed from the plastic and attached in the center of the plastic panels over the bag.

Waiver Request

The registrant is requesting waivers for the following requirements:

Aquatic Invertebrate Acute Toxicity	(OPPTS 850.1010)
Freshwater Fish Acute Toxicity	(OPPTS 850.1075)
Avian Acute Oral Toxicity	(OPPTS 850.2100)
Avian Dietary Toxicity	(OPPTS 850.2200)
Honeybee Acute Contact Toxicity	(OPPTS 850.3020)
Seedling Emergence	(OPPTS 850.4100)
Vegetative Vigor	(OPPTS 850.4150)

Registrant's Justification

Geraniol (3,7-dimethyl-2,6-octadien-1-ol) (CAS No. 106-24-1, PC code 597501) is a naturally-occurring alcohol that has the odor of roses and acts as a floral attractant for target pests. It is a component of oil-of-rose, palmarosa oil, geranium oil, lemon oil, citronella oil, and other essential oils. The vapor pressure of geraniol is 0.0147 to 0.0161 mm Hg at 25°C.

Eugenol (2-methoxy-4-(2-propenyl)phenol) (CAS No. 97-53-0, PC code 102701) is an allylbenzene that has a pleasant, spicy, clove-like odor and acts as a floral attractant for target pests. It occurs naturally in cloves, nutmeg, cinnamon, and bay leaves.

Z-7-Tetradecen-2-one (CAS No. 146955-45-5) is a sex pheromone produced by the female Oriental beetle (*Anomala orientalis*) to attract males of the same species. It is similar to a lepidopteran pheromone as specified per 40 CFR 180.1153, except that the unbranched aliphatic chain ends in a ketone functional group rather than an alcohol, aldehyde or acetate functional group. The vapor pressure is ~0.008 mm Hg at 25°C.

2-Phenyl ethyl propionate (CAS No. 122-70-3, PC code 102601) is a naturally occurring pheromone that has an herbaceous-rosy, deep fruity odor with a spicy note that acts as a floral attractant for target pests. It is found in cheese and peanuts. The vapor pressure is 0.0491 to 0.0852 mm Hg at 25°C.

Bull Run Japanese & Oriental Beetle Trap is planned for outdoor residential use, with a use season of approximately six weeks. The product label specifies a maximum use rate of eight traps/acre. The product is for terrestrial use; no aquatic use is anticipated. Geraniol, Z-7-tetradecen-2-one, and 2-phenyl ethyl propionate are insoluble in water; eugenol is only slightly soluble in water.

No significant exposure of non-target organisms to the product is anticipated. The cartridge holding the attractant is a hollow cylinder with a cap. After the attractant beads have been placed in the cartridge at the manufacturing facility, the cap is attached and sealed with eight spot welds. It cannot be opened without the use of a tool. The cartridge is for a single use and is not designed to be reused or refilled. When the product is assembled in the field, the attractant cartridge is attached to the trap using a plastic-coated wire that is in turn used to attach the trap to a support, e.g., fencepost. The cartridge is anticipated to stay attached to the trap, and the trap to the support.

When the trap is full, or the target pests cease to be a problem, the cartridge and the trap are to be wrapped in newspaper and disposed in the household trash. In the unlikely event of an accidental exposure to non-target organisms, the exposure would be minimal, since the total quantity of attractant in the cartridge is only 5.814 g, and of that, only 6.62% (3.85 g) is geraniol, 0.034% (0.002 g) is Z-7-Tetradecen-2-one, and 6.622% (0.385 g) is 2-phenyl ethyl propionate.

In an efficacy test of the product, each of three field sites contained 18 traps: six traps with freshly-produced attractant, six traps with attractant that had been stored in its commercial packaging for one year, and six control traps containing no active ingredient. No non-target insects were collected by any of the 54 traps (the size of the field sites and the length of exposure were not provided in MRID 47255015).

Reviewer's Conclusion

Due to the use pattern and the insolubility or low solubility of the active ingredients in water, aquatic exposure is unlikely. Due to the active ingredients being enclosed in the sealed cartridge, oral exposure of avian species is also unlikely. Based on the results of the efficacy test, the product is not attractive to honeybees. However, no information was provided for the nuranone active ingredient, and the inert ingredients were not addressed. Also, seedling emergence and vegetative vigor were not addressed.